

Application No.: 10/047,681

Atty Docket No.: JCLA7793

REMARKS**Present Status of Patent Application**

Claims 1-17 remain pending of which claim 1, 3, 7, 9, 13 and 17 have been amended to more explicitly and more clearly describe the claimed invention. It is believed that no new matter adds by way of these amendments made to the claims or specification, or otherwise to the application. Support for the amendments to claims can be found on page 8, lines 17-22. For at least for the following reasons, Applicant respectfully submits that claims 1-17 patently define over the prior art of record. Reconsideration is respectfully requested.

Response to Claims Rejections under 35 USC§112

1. The Office Action rejected claims 1-17 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In rejecting the above claims, the Office Action stated that it is unclear as to how the word flux further narrows the scope of the layer.

In response hereto, Applicant has amended claims 1, 4 and 9. After entry of the above amendment, it is believed that the above rejections can be overcome. Reconsideration is respectfully requested.

Application No.: 10/047,681

Atty Docket No.: JCLA7793

Response to Claims Rejections under 35 USC§103

2. *The Office Action rejected claims 1, 2, 4-6, 8-12 and 14-16 under 35 U.S.C. 103(a) as being unpatentable over Takano.*

*In rejecting the above claims, the Office Action stated that Takano discloses a flip chip package having a bonded anisotropic conductive film comprising a thermal set plastic material (3a) and a plurality of conductive particles with the plastic material, wherein each conductive particle has a conductive that is band in a ball shape or bubble and therefore is a **gold bead (7c)**, a **bonding layer (7b)** forming a spherical structure and a **flux layer (7a)**. Further, the Office Action indicated that the bonding layer 7b lays over the conductive bead and thus covers the bead 7C, and the flux layer 7a lays over the surface of the bonding layer 7b and thus covers the bonding layer 7b.*

Applicant respectfully disagrees and traverses the above rejections as follows. Takano in FIG 2(a) substantially shows a detailed structure of a conductive particle 7, in that the layer 7c forms the outermost covering layer of the conductive particle 7. Further, the material of the outermost covering layer according to Takano is made of a metal coating (gold). Accordingly, Applicant respectfully submits that Takano substantially fails to teach, suggest or disclose the outermost covering layer of the conductive particle is comprised of an insulating layer as required by independent Claims 1, 4 and 9, instead Takano substantially teaches the outermost covering layer is comprised of a metal coating (gold). The advantage of forming an insulating layer as an outermost covering layer of the conductive bead/particle is that it facilitates the formation of common metallic bonds with the contact points, and also shorting between the

Application No.: 10/047,681

Atty Docket No.: JCLA7793

neighboring contact points can be effectively prevented. Therefore the reliability of the semiconductor device can be effectively promoted. In other words, because Takano substantially fails to teach, suggest or disclose an insulating layer for forming an outermost covering layer of the conductive bead/particle, instead substantially teaches an outermost metallic (gold) coated layer 7c, and therefore there is a potential risk of shorting of the neighboring contact points. Accordingly, Applicant respectfully submits that Takano teaches away from the claimed invention in this regard, and therefore Claims 1, 4 and 9 should be allowed.

Further, Takano substantially fails to teach, suggest or disclose a conductive bead and a bonding layer covering the conductive bead, wherein the bonding layer is comprised of a conductive layer as required by claims 1, 4 and 9. Instead Takano substantially teaches a bead 7a composed of a resin material and another resin layer 7b covering the bead 7a. It is well known in the art that the resin material is a non-conductive material. Accordingly, Applicant respectfully submits that Takano fails to teach, suggest or disclose every features of the claimed invention in this regard.

For at least the foregoing reason, Applicant respectfully submits claims 1, 2, 4-6, 8-12 and 14-16 patently define over Takano. Reconsideration and withdrawal of these rejections is respectfully requested.

Application No.: 10/047,681

Atty Docket No.: JCLA7793

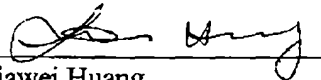
CONCLUSION

For at least the foregoing reasons, it is believed that all pending claims 1-17 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel to arrange for such a conference.

Date: 7/29/2003

4 Venture, Suite 250
Irvine, CA 92618
Tel.: (949) 660-0761
Fax: (949)-660-0809

Respectfully submitted,
J.C. PATENTS


Jiawei Huang
Registration No. 43,330

FAX RECEIVED

JUL 29 2003

TECHNOLOGY CENTER 2800